WASHINGTON DEPARTMENT OF ECOLOGY

ENVIRONMENTAL ASSESSMENT PROGRAM

FRESHWATER MONITORING UNIT

STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 27D090

STATION NAME: East Fork Lewis River at Dollar Corner

WATER YEAR: 2008

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Introduction

Watershed Description

The East Fork of the Lewis River is located in southwestern Washington in Clark and Skamania counties. It is the largest tributary of the Lewis River, with a drainage basin area of 217 square miles. The river runs about 43 miles from its source to its confluence with the main stem Lewis River. The eastern portion of the river drainage basin lies in the forested foothills of the Cascade Mountains within Gifford Pinchot National Forest. Major tributaries include Rock, Yacolt Mason, Jenny, Breeze and McCormick creeks.

Gage Location

The gage is located in Clark County at Dollar Corner County Park off NE 72nd Ave. The gage house is located on the left bank of the River about 250 ft downstream of the boat launch.

Table 1.

Drainage Area (square miles)	217
Latitude (degrees, minutes, seconds)	45 48 51
Longitude (degrees, minutes, seconds)	122 35 30

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	734
Median Annual Discharge (cfs)	651
Maximum Daily Mean Discharge (cfs)	3,480
Minimum Daily Mean Discharge (cfs)	35
Maximum Instantaneous Discharge (cfs)	4,300
Minimum Instantaneous Discharge (cfs)	33
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	1,731
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	67
Number of Days Discharge is Greater Than Range of Ratings	2
Number of Days Discharge is Less Than Range of Ratings	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Narrative

Data gaps totaling 123 days occurred throughout the water year. These gaps were filled with data from USGS Station #1422500 E.F. Lewis at Heisson. These gaps occurred because of equipment and electrical issues.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	9
Weighted Rating Error (% of discharge)	25
Total Potential Error (% of discharge)	34

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	3		
Period of Ratings	11-10 to 10/2008		
Range of Ratings (cfs)	17 to 7,230		
No. of Defining Measurements	31		
Rating Error (%)	9		

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Narrative

Bank full was surveyed at 10.03 ft on 10/05/2009 with estimated flow of 7,230cfs.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	4.04
Maximum Recorded Stage (feet)	11.23
Range of Recorded Stage (feet)	7.19
Number of Un-Reported Days	20
Number of Days Qualified as Estimates	17
Number of Days Qualified as Unreliable Estimates	18

Narrative

There were 13 days over 20% Logger Drift Assessment Error, 5 days est., due to battery and 14 days over 50% to 100% Logger Drift Assessment Error and 18 days over 100% Assessment Error. Seven days were unreported, because stage exceeded twice the highest measured discharge.

Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	None
Range of Modeled Stage (feet)	
Range of Modeled Discharge (cfs)	
Valid Period for Model	
Model Confidence	

Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
None	

Activities Completed